

Work Order ID 146599

Thursday, May 19, 2016 2:56:59 PM

146599

Page 1

Item ID: D2803-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket

Start Date: 5/6/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MLS Date: MAY 24 2016 Tooling:

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2803	Rev B

100	FLOW WATER JET	0.00							
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100

Waterjet

Memo

1.20

FLOW CNC Waterjet

1-Cut as per FILE D2803-1_blank

Dwg Rev: B

Prog Rev: B

2-Debur if necessary

(4)

Ø

DE 16/06/15

110	HAAS CNC VERTICAL MACHINING #1	1.58							
-----	--------------------------------	------	--	--	--	--	--	--	--

110

HAAS 1

Memo

2.68

HAAS CNC vertical machine #1

Machine as per folio FA102

(4)

Ø

DAS

20

9-89

16-06-24

120	QC2- Inspect parts off machine FAI/FAIB	0.00							
-----	---	------	--	--	--	--	--	--	--

120

QC

Memo

0.04

Quality Control

4

Ø

DAS

20

9-89

16-06-24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
		OTHER : _____			

1 465.99

Thursday, May 19, 2016 2:57:00 PM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 5/6/2016 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 4.00 */*

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC8- Inspect parts - second check

0.00

130

QC Memo

0.08

Quality Control

140 Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish Memo

0.24

Hand Finishing

150 QC7-Inspect Chemical Conversion Coat

0.00

150

QC Memo

0.04

Quality Control

DAS

44
~~9-69~~

116-026-28

DA6
38
9-89

JUL 07 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 146599

Thursday, May 19, 2016 2:57:00 PM

146599

Page 3

Item ID: D2803-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket

Start Date: 5/6/2016 Start Qty: 4.00

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Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <u>St 472</u>	0.00							
160									
Packaging	Memo	0.04						DAS 6 9-89	
Packaging								JUL 07 2016	
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.40							16/7/12 JH
Quality Control									

DAS
21
9-89

JUL 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, May 19, 2016 2:56:59 PM

Page 1

Work Order ID: 146599

146599

Parent Item: D2803-1

D2803-1

Parent Item Name: Bracket

Start Date: 5/6/2016

Required Date: 5/19/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP A00.11.06New IssueEC
 IPP Rev:B Blanks Now Cut on Waterjet 06-06-14 JLM
 IPP Rev:C Removed Tumbling 08-09-10 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.500X10.00 0		Purchased	No			100	f	25.7000	1.9167	8.070316			

M6061T6B0 500X10 000

6061-T6 Bar .500 x 10.00

02/16/06/15

Location	Loc Qty	Loc Code
MAT	13.7	
MAT001	12	
M131700	13.7	
M133699	12	

7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

DART AEROSPACE LTD		Work Order:	146595
Description: Bracket		Part Number:	D2803-1
Inspection Dwg: D2803 Rev: B		Page 1 of 1	

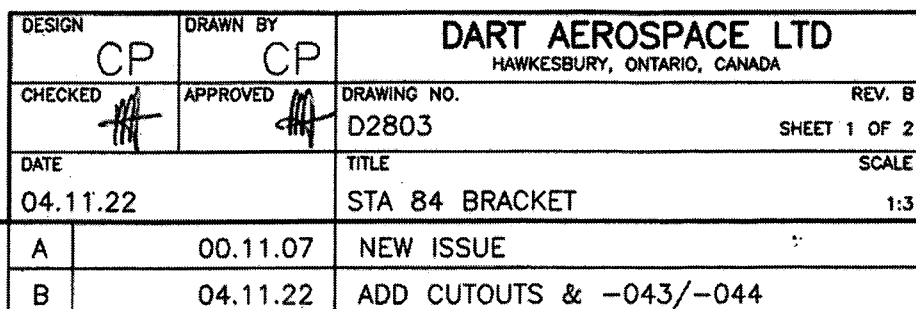
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

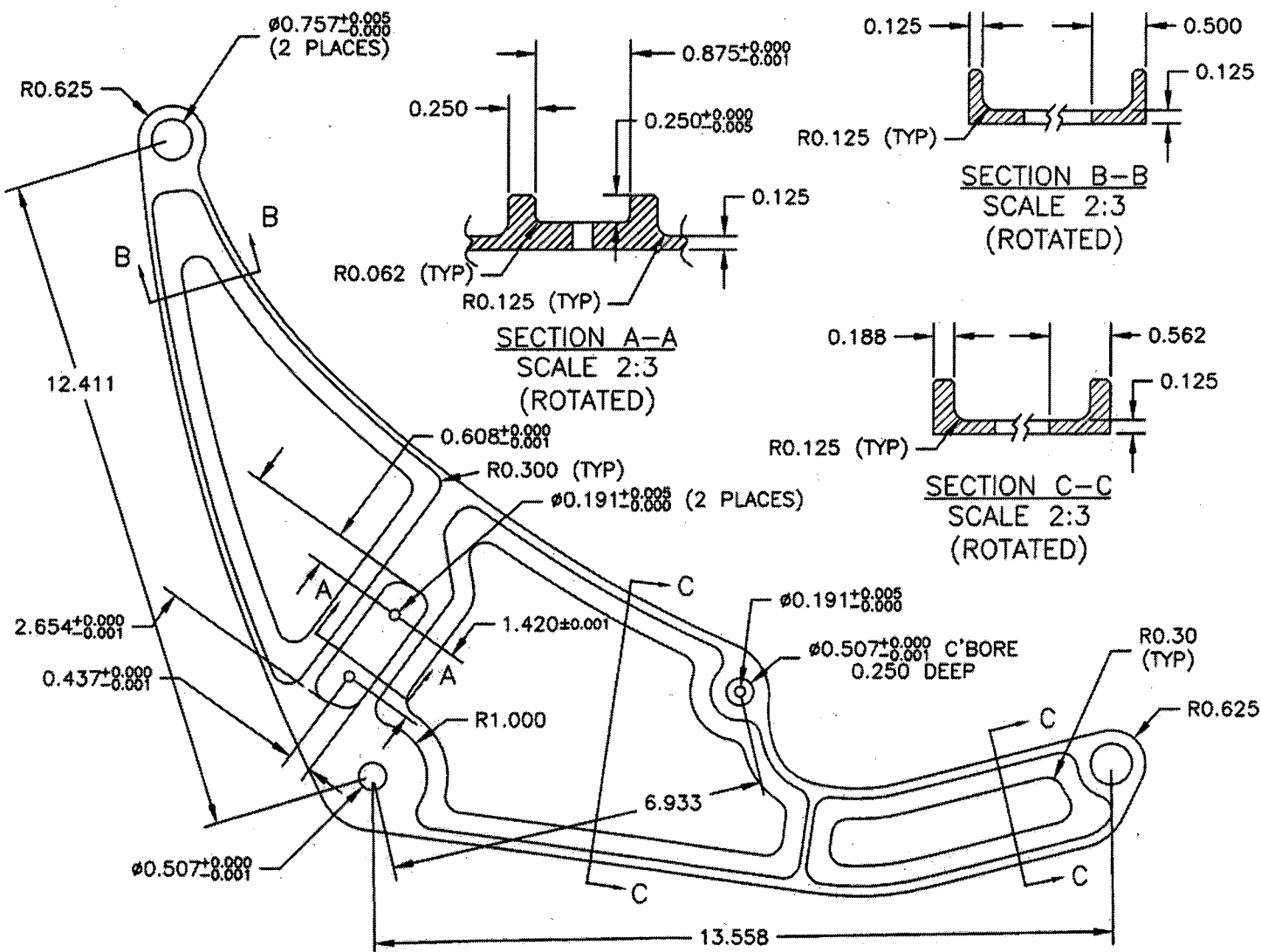
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.757	+0.005/-0.000	.759	✓		gauge Pin	
Ø0.191	+0.005/-0.000	.194	✓		"	
Ø0.507	+0.000/-0.001	.507	✓		"	
13.558	+/-0.010	13.558	✓		SLOI	Tape
Ø0.507	+0.000/-0.001	.507	✓		Gauge Pin	
12.411	+/-0.010	12.411	✓		SLOI	
2.656	+0.000/-0.001	2.656	✓		SLOI	View
0.437	+0.000/-0.001	.437	✓			
1.420	+/-0.001	1.420	✓			
6.933	+/-0.010	6.933	✓			
0.250	+/-0.010	.249	✓			
0.875	+0.000/-0.001	.875	✓			
0.250	+0.000/-0.005	.247	✓			
0.125	+/-0.010	.125	✓			
0.125	+/-0.010	.124	✓			
0.125	+/-0.010	.124	✓			
0.125	+/-0.010	.124	✓			
0.500	+/-0.010	.499	✓			
0.562	+/-0.010	.561	✓			
0.188	+/-0.010	.187	✓			

Measured by:	DAS 29 9-89	Audited by:	DAS 44 9-89	Prototype Approval:	N/A
Date:	16-06-24	Date:	16-06-28	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.25	New Issue	KJ/JLM	
B	07.07.18	12.625 dimension removed	KJ/JLM	



05.03.11



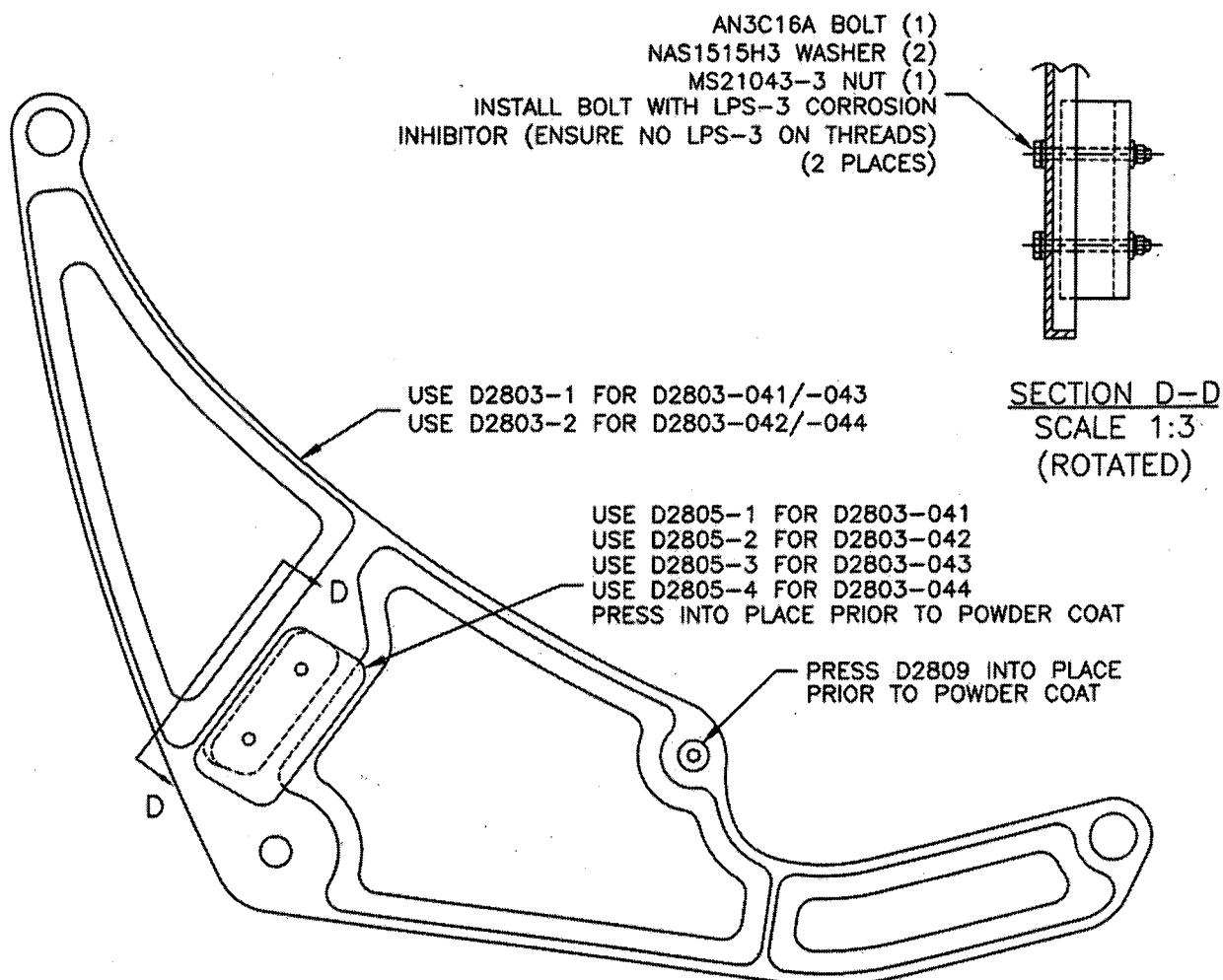
1) MACHINE PER DRAWING FILE "D2803.SLDPRT"
2) MATERIAL: 6061-T6 (QQ-A-200/8) OR (QQ-A-250/11) 0.500 THICK
3) DEBURR TO LEAVE R0.030 - 0.063 ON ALL EDGES
4) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

OCCUPY
 TO
 COLLECTING
 LED COPY
 ENDMENT
 NOTICE
 YOUR
 146533-MLS
 HICK
 160524

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DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2803	REV. B SHEET 2 OF 2
DATE 04.11.22		TITLE STA 84 BRACKET	SCALE 1:3



RELEASED

05-03-11 #

D2803-041/-043 BRACKET ASS'Y (SHOWN).
D2803-042/-044 BRACKET ASS'Y (OPPOSITE)

6) FINISH: POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6)
OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

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